

REMARKS

Accompanying this Amendment is a letter submitting a substitute drawing to replace original sheet 5 of the drawings. It is respectfully requested that the Examiner indicate whether or not she has reviewed U.S. Patent No. 5,755,160 of Blufordcraving cited in the parent application under the provisions of MPEP 2001.06(f) , and also that this patent be made of record if appropriate.

In the Office Action, the Examiner first notes that non-elected claims 16 to 31 are withdrawn from consideration. In the foregoing amendment, claims 16 to 31 have been canceled without prejudice. The Applicants intend to file a divisional application directed to the non-elected claims before prosecution of the current application is complete.

The Examiner has also raised a number of objections to the drawings and specification on pages 2 to 4 of the Office Action, on the basis that features of the invention specified in the claims are not shown in the drawings and/or do not have proper antecedent basis in the specification. At the top of page 4, the Examiner states that the specification is the same as the parent case without modifying the specification with regard to new limitations added in the claims. This is not entirely correct. This Continuation In Part (CIP) application includes the same embodiment as the parent case in Figures 1 to 9, but adds a new embodiment in Figures 10 to 13, with claim 1 being a generic claim covering both embodiments, claims 2 to 13 being directed to the embodiment of Figures 1 to 9, and claims 14 and 15 being directed to the embodiment of Figures 10 to 13. It is believed that all features defined in these claims have proper antecedent basis in the specification and are included in the drawings, but some modifications of the language used in the specification have been made in the foregoing amendment in order to emphasize the antecedent language and for better conformity with the language in the claims. The Examiner's objections are dealt with on a claim-by-claim basis below:

Claim 1

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The Examiner contends that the first fixed member, the opening of the annular chambers, the second member, the first ports of the first member, and the second ports of the rotatable member, are not shown in the drawings, and also contends that these features lack antecedent basis in the specification.

Paragraph 0035 of the specification has been amended to clarify that, in the first embodiment, the swivel joint assembly includes a first member comprising an inner fixed spool 56 and a second member comprising an outer swivel casing 60. Similarly, paragraphs 0046 and 0047 describing the second embodiment have been amended to specify that the first member in this case is a lower fixed circular member 202 and the second member 214 is a flat circular upper plate. This was also specified in original dependent claims 2 and 14. The first and second members 56 and 60 of the first embodiment are clearly illustrated in Figures 3, 4, 7 and 8. The first and second members 202 and 214 of the second embodiment are clearly illustrated in Figures 11 to 13.

The openings of the annular chambers are clearly shown in the drawings in both embodiments of the invention, and the specification has been amended as appropriate to highlight these features and to use the same language as claim 1. Figure 4 illustrates that the annular chambers of the spool 56 have annular openings at their outer ends, and paragraph 0036 has been amended to describe these openings. Figure 12 illustrates that the annular grooves in the first member are also open at their upper ends, so that they are closed by the second member or plate 214, as clearly described in paragraph 0046.

Claim 1 has been amended to define a first set of ports in the first member and a second set of ports in the second member, and similar language has been used in the specification to properly identify these ports. As regards the first embodiment, the first set of ports 78, 80, 84 and 86 are clearly described in paragraph 0037 and illustrated in Figures 4, 6, 7 and 8. The second set of ports 90, 92, 94 and 95 are described in amended paragraph 0038 and illustrated in Figures 3, 7 and 8. As regards the second embodiment, the first set of ports 222, 224, 226 and 228 are described in paragraph

0049 and illustrated in Figures 10 to 12. The second set of ports 230,232,234 and 236 in the second member are described in paragraphs 0049 and 0050 and are also illustrated in Figures 10 to 12.

It is believed that the amendment in claim 1 and the foregoing paragraphs of the specification highlight the proper antecedent basis for the features listed by the Examiner from claim 1, and that each of these features has proper antecedent basis and is illustrated in the drawings. No amendment to the drawings is needed to illustrate these features since they are present and identified in the drawings as originally filed.

Claim 2

The Examiner contends that the following features are lacking from the drawings and not described in the specification: the fixed spindle, annular flanges of the spindle, and outer casing of the spindle. The term "spindle" in the claims is a typographic error, and has been changed to the term "spool" in claims 2, 3 and 8, for consistency with the specification. The fixed spool 56 is clearly illustrated in Figures 4 and 6 to 8, and the annular flanges 68,69,70,71 and 72 are clearly illustrated in Figure 4. The term "annular ring" in paragraph 0036 has been changed to "annular flange" for consistency with the language used in the claims. The outer casing 60 is also clearly illustrated in Figures 3, 7 and 8 and described in paragraphs 0035 and 0038.

It is therefore submitted that the features of claim 2 noted by the Examiner are already illustrated in the drawings, and no drawing amendment is required in this respect. It is also submitted that the terminology used in amended claim 2 now corresponds with the terminology in the specification, such that proper antecedent basis is provided for the features of claim 2.

Claims 4 and 9

The Examiner contends that the annular sensor chamber and fluid sensors of these claims are not shown in the drawings and lack antecedent basis in the specification. This is not correct. The annular sensor chambers 96 of the first embodiment are clearly illustrated in Figures 4 and 5 of the drawings, and are described

in paragraph 0039, and the fluid (gas and water) sensors 98, 99, which extend into these chambers, are illustrated in Figure 3 and also described in paragraph 0039.

Claim 12

The Examiner objects that the electrical swivel assembly, fixed contact core, aligned central through bores, and outer contact portion of claim 12 are not shown in the drawings, and also that these terms lack antecedent basis and are not clear in the specification. It is submitted that these features were all shown in the drawings as filed and the specification has been amended where appropriate for consistency with the terminology used in claim 12. The electrical swivel assembly 55 is now described specifically in amended paragraph 0035, and the reference to "The upper or electrical portion 55 of the swivel assembly" in the first line of paragraph 0041 has been corrected to read "The upper or electrical swivel assembly 55" for consistency with the claim language. The electrical swivel assembly 55 is clearly illustrated in Figures 3 and 9. The term "electrical swivel" in paragraph 0042 has been corrected to read "Electrical swivel assembly 55" for consistency with the remainder of the specification and claims.

The specification has also been revised in paragraph 0041 to change "inner fixed power conducting core 100" to "inner fixed contact core 100" for consistency with claim 12, and the contact core 100 is clearly illustrated in Figure 9. Paragraph 0041 has also been amended to specifically describe the aligned central through bores 63 and 263 in the first member or spool 56 and the contact core 100, as illustrated in Figure 9. The central through bore in the contact core 100 has been provided with a reference number 263 in the enclosed amended Figure 9. Paragraph 0042 has also been amended to change "outer rotating portion" to "outer contact portion" for consistency with claim 12. Again, Figure 9 clearly illustrates that the outer contact portion is secured to the outer swivel casing or second member 60, the outer contact portion comprising upwardly projecting posts 116 carrying contact brushes 122 in the exemplary embodiment.

It is therefore submitted that the features of claim 12 listed by the Examiner on pages 2 and 3 of the Office Action are all illustrated in the drawings and have clear antecedent basis in the specification.

Claim 13

The Examiner has also objected that the rotary connector, a fixed part of the connector, fixed electrical service lines, and conductors of claim 13 are not illustrated in the drawings and are unclear. Again, it is submitted that these objections result only from slight differences in terminology used in the specification and claims. In the foregoing amendment, claim 13 has been amended for consistency with the wording used in the specification, as follows:

"Rotary connector" has been changed to "rotating electrical connector" – The rotating electrical connector 126 is described in paragraph 0043 and is clearly illustrated in Figure 9.

"Fixed part" (of the rotating electrical connector) has been changed to "fixed portion", for consistency with the terminology used in paragraph 0043, specifically "lower fixed portion 134". The fixed portion 134 is also clearly illustrated in Figure 9.

"Rotary part" (of the rotating electrical connector) has been changed to "rotating portion", for consistency with the terminology used in paragraph 0043, specifically "upper rotating portion 135". The rotating portion 135 is also clearly illustrated in Figure 9.

The phrase "and having conductors" has been deleted in amended claim 13. The term "fixed electrical services lines" in claim 13 listed by the Examiner has proper antecedent basis in the specification and is also illustrated in the drawings. "Fixed electrical service lines 136" are described in paragraph 0043 of the specification and illustrated in Figure 9.

It is submitted that the foregoing amendments to claim 13 and the above comments deal with all of the Examiner's objections to this claim, and that all elements of this claim have proper antecedent basis in the specification and are illustrated in Figure 9.

Claim 14

The Examiner has objected that the following elements of claim 14 are unclear and are not illustrated in the drawings: "lower fixed circular plate", "upper plate", and "annular grooves". Claim 14 is directed to the second embodiment of the invention as illustrated in Figures 10 to 13. The term "lower fixed circular plate" and "lower plate" in claim 14 has been amended to read "lower fixed circular member", and corresponding terminology is used in amended paragraph 0046 to refer to the lower fixed circular member 202 as illustrated in Figures 10, 11 and 12. The term "upper circular plate" in claim 14 has antecedent basis in paragraph 0047 which defines a second member 214 which comprises a generally flat, upper circular plate. Thus, reference number 214 in Figures 11 and 12 indicate the upper circular plate of claim 14, and this element is also clearly illustrated in the drawings.

The annular chambers in the second embodiment of the invention are upwardly facing annular grooves in the lower fixed circular member. Paragraph 0046 has been amended for consistency with the language used in claim 14, now defining upwardly facing annular grooves which form chambers 204, 206, 208, 210. These annular chambers or grooves can clearly be seen in the top plan view of Figure 11 as well as the cross sectional view of Figure 12.

It is therefore submitted that the foregoing comments, along with the amendments to claim 14, deal with all of the Examiner's objections to this claim.

Applicant has reviewed the specification and drawings to ensure that all claim limitations correspond with the specification, as suggested by the Examiner. It is submitted that the foregoing amendments and the above comments deal with all of the Examiner's objections to the drawings and claims, and that no further drawing amendment apart from the addition of reference numeral 263 in Figure 9 is necessary, since all claimed elements are already clearly illustrated in the drawings. Reconsideration and reversal of the objections on pages 2 and 3 of the Office Action is respectfully requested.

On page 4 of the Office Action, the Examiner has rejected claims 1-3, 8 and 14 as anticipated by U.S. Patent No. 4,877,054 of Wältér. This rejection is hereby

traversed. It is pointed out that, for a reference to anticipate a claim, the reference must include each and every claimed element. The Examiner contends that Walter has a first fixed member 22 with annular chambers 32 and 38, a second member 38 rotatably mounted on the first member and extending over chamber openings in the first member (98 and 82), the first member having first ports 44,96 and the second member having second ports 118,120,122,124,126 connected to the respective chambers.

The Examiner's evaluation of Walters is incorrect. This reference relates to a rotary switch and valve assembly for a multiple work station machine, and is quite a different structure from the swivel assembly claimed in the present application. Contrary to the Examiner's statement, part 22 in Walter is a vertical main shaft which rotates continuously (see column 2, line 41) not a fixed member. Reference number 32 refers to a rotary switch (column 2, lines 61 to 64), not an annular chamber. Reference number 38 is a general number referring to the rotary valve overall (column 2, .lines 66 to 68). Thus, neither reference number 32 nor reference number 38 refers to any annular chamber in part 22. In fact, shaft 22 does not have annular chambers.

It is also stated that reference number 38 is a second member rotatably mounted on the first member. This is also not correct. Reference number 38 describes the entire rotary valve which is secured to the rotating shaft 22. The Examiner contends that member 38 extends over chamber openings in the first member (22) by numbers 98 and 82. Parts 98 and 82 do not extend over openings in any annular chambers to form rotating wall portions closing those chambers. There are no annular chambers on the rotating shaft 22, nor are there any chambers closed by the parts the Examiner mentions. Part 82 is a mounting ring which carries an inlet manifold 80. Reference number 98 refers to a cylindrical surface of inlet manifold 80. Inlet manifold 80 carries the inlet port 102 and passageways for connection of various operating fluids to the valve.

In Walters, the rotary valve is mounted on a fixed support member 62 and fixed sleeve 54. These parts are quite different from the fixed first member or spool as claimed in claims 1 and 2. There is nothing on the sleeve 54 or on the rotating shaft 22

which could be defined as the plural annular chambers of claim 1, nor any member which could be defined as a second member extending over openings in annular chambers in the first member.

The portions of Figure 3 indicated by the Examiner to be "annular chambers" and "openings" on the copy of the drawing attached to the Office Action are open spaces and are not covered by anything. There are also no seals as claimed in claim 1 in Walters. The Examiner refers to "seals" 70, 134, 146, 174 and 190. Most of these parts are not even seals, and certainly do not seal any annular chamber as defined in claim 1 or claim 2. Reference number 134 refers to a slip ring and does not act to seal any annular chamber. Reference number 146 refers to circumferentially extending contacts, and not to any seals. Reference number 174 is to an insulating spacer (see Figure 4) and does not seal any annular chamber. Reference number 190 is also a spacer. Reference number 70 is to a seal between the manifold plate 42 and inlet manifold 80. There is no annular chamber sealed by seal 70. Part 44, which the Examiner calls a "first port", is actually a key for rotation of manifold plate 42 with the shaft 22 (see column 3, lines 6 to 8). The other "first port" 96 is the L shaped port by which various fluids can be fed to the successive rotary valve work stations. Walter clearly does not suggest a set of first ports by which different fluids can be connected to different chambers, as claimed in claim 1.

The Examiner also refers to the ports 118, 120, 122, 124 and 126 in the manifold plate 42 as being equivalent to the claimed second ports of this invention. However, these ports are not for connecting utility fluids out of a series of chambers within the valve unit, but instead are for supplying different fluids sequentially to work stations 26 in timed relation.

In rejecting claim 1, the Examiner has simply identified isolated features of Walter (such as ports and seals) without explaining how these have any relevance to the overall structure claimed in claim 1. In fact, the overall structure of most or all of the elements claimed in claim 1 is completely lacking from Walter. Walter simply does not have a fixed member with annular chambers opening outwardly and a second member

rotatably mounted on the fixed first member to close the openings in the annular chambers. This basic structure is completely lacking from Walter, and the associated seals and ports arranged in the manner defined in claim 1 are also lacking.

It is submitted that claim 1 is clearly not anticipated by Walter, and reconsideration and reversal of the rejection based on this reference is respectfully requested.

Claims 2, 3, 8 and 14 depend from claim 1 and are distinguished from Walter for the same reasons as claim 1, and additionally since these claims define other features which are completely lacking from this reference. Referring to claim 2, there is no inner fixed spool in Walter. The member 22 is a continuously rotating shaft. There are also no axially spaced, outwardly projecting annular flanges on member 22 which define annular chambers. The Examiner has marked up a copy of Figure 3 of Walter with what are asserted to be annular flanges and chambers, as well as openings in annular chambers. However, the problem with this is that there is no outer casing rotatably mounted on the structure of Figure 3 so as to form an outer wall to the Examiner's proposed "chambers", let alone any ring seals mounted on the outer edges of the flanges so as to form a rotating seal between the casing and flanges. Parts 146 and 134 are not seals. They are conductive slip rings or contacts (column 4, lines 52 and 62-65). Contacts are not equivalent to ring seals, and do not form a sealing engagement with anything, nor do they seal any chamber. Figure 5 illustrates how electricity is supplied to the slip ring 134. As the shaft 22 rotates to sequentially position work stations 26, the rotary switches and rotary valve serve to supply the required electrical connections and fluid connections to the work station.

It is therefore submitted that claim 2 is also not anticipated by Walter. Walter completely lacks the structure as claimed in this claim, and specifically has no inner fixed spool with annular flanges having ring seals on their outer ends, annular chambers formed between the flanges, or outer casing rotatably mounted on such a fixed inner spool so as to form an outer wall of each of the chambers and being in rotatable sealing engagement with each of the ring seals. Reconsideration and reversal of the rejection of

claim 2 is respectfully requested.

Claim 3 depends from claim 2 and is distinguished from Walter for the same reasons as claim 1 and 2. Additionally, there is no inner fixed spool in Walter which has a lower end wall through which the first ports extend or any bore extending from the port through the spool. Part 22 is a rotating shaft. The lower end wall or manifold plate 42, 66 has ports, which the Examiner calls "second ports" in rejecting claim 1, but these do not connect to any bores extending through the shaft 22 nor do they connect with any annular chambers formed between annular flanges on the shaft. The structure as claimed in claim 3 is totally lacking from Walter. The Examiner contends that Walter has second ports 118, 120, 122, 124 and 126 provided at "axially spaced locations" on the casing, which the Examiner now contends is part 98. However, the ports 118, 120, 122, 124 and 126 are provided on the disc shaped manifold plate 42, not the part 98, and they are not axially spaced (i.e. spaced along the axis of shaft 22). Further, part 98 cannot be the outer casing as defined in claims 2 and 3 since it does not form an outer wall of a plurality of annular chambers as defined in the claims, nor is it in rotatable sealing engagement with any ring seals on the outer ends of any flanges on shaft 22.

It is submitted that the structure of claim 3 is also neither shown nor suggested by Walter, and reconsideration and reversal of the rejection of this claim is also respectfully requested.

Claim 8 depends from claim 2, and is not anticipated by Walter for the same reasons as stated above in connection with claims 1 and 2. Additionally, the elements defined in claim 8 are also completely lacking from Walter. Claim 8 defines two end flanges at opposite ends of a fixed spool which form an outer end wall of respective annular end chambers, as well as intermediate flanges separating adjacent annular chambers along the length of the spool (i.e. at least four flanges), and each flange having a pair of ring seals at its outer edge for rotatable sealing engagement with the outer casing. No such structure is present in Walter. The Examiner contends that Walter has two end flanges at opposite ends of spool 42 (although she defines the spool or

spindle as member 22 in her rejections of claims 1 and 2). This could be a typographical error. Assuming this is the case, then member 146 is located at only one end of shaft 22 and does not form the end wall of any annular chamber which is closed by an outer casing. The space between member 146 and the next annular flange (carrying slip ring 134) is not a chamber as defined in claims 1 and 2, since it does not have any ports for incoming and outgoing fluids, does not have an outer opening closed by an outer casing rotatably mounted on shaft 22 (there is no such casing in Walter), and is not sealed.

If the Examiner intended to define inlet manifold 42 as a flange at the opposite end of the shaft 22, this also does not form the end wall of any annular chamber, nor are there any intermediate flanges between members 42 and 146 forming additional annular chambers, nor is there any flange having a pair of spaced ring seals on its outer end in rotatable sealing engagement with any outer casing. The Examiner also defines member 146 as a pair of spaced ring seals (in addition to an annular flange). This member is, in fact, a single circumferential electrical contact (see Figure 4) for contacting brush 160 to supply electrical energy to contacts 146 (see column 5, lines 18 to 23). The Examiner appears to have completely ignored the teaching in the Walter specification when she identifies contact 146 as a pair of ring seals. The Examiner attempts to interpret structure in Walter's Figure 3 in isolation from the teachings in Walter's specification. The areas labeled as "openings" are not at the outer ends of any annular chambers designed for communicating fluids into and out of the valve assembly, and the so-called "flanges" at each end of this region are of different diameters, carry no ring seals, and are not in rotatable sealing engagement with any outer casing. In fact, the entire structure claimed in claim 8 is completely lacking from Walter, and this reference clearly does not anticipate this claim.

It is submitted that claim 8 is also not anticipated by Walter, and reconsideration and reversal of the rejection of this claim is also respectfully requested.

The Examiner also rejects claim 14, directed to the embodiment of Figures 10 to 13, as anticipated by Walter. Claim 14 depends from claim 1 and is distinguished from Walter for the same reasons as claim 1. Additionally, the structure defined in claim 14 is

completely lacking from Walter. In rejecting claim 14, the Examiner contends that Walter has a lower fixed circular plate 40,130 and an upper circular plate 42,32 rotatably mounted on the lower plate, as well as annular chambers 82, 98 comprising a series of radially spaced upwardly directed annular grooves in the lower plate, referring to 214,42 and column 4, lines 41 to 45. This evaluation of Walter is incorrect.

Member 40 is an annular mounting flange or support on which manifold plate 42 is seated, and both are keyed for rotation with shaft 22 (column 3, lines 3 to 8). Thus, neither member 40 nor member 42 is fixed, and these parts do not rotate relative to one another. It is therefore not clear how one of the members 40 can be part of a fixed circular plate and the other member 42 can be part of an upper circular plate rotatably mounted on the lower plate. Member 130 is axially spaced a considerable distance from member 40, at the opposite end of shaft 22, and it is not clear how the Examiner intends that it could be part of the same circular plate. If the Examiner means that member 130 is an alternative to member 40 as the first fixed circular plate, then it is pointed out that member 130 is a support or mounting plate at the upper end of an inner sleeve 46 which also rotates with shaft 22 (column 4, lines 47 to 49, column 3, lines 14 to 16). Member 32 is a high voltage rotary switch (column 2, lines 61 to 64) and it is not clear how the Examiner feels that this is in any way equivalent to the upper circular plate of claim 14. The rotary switch 32 is mounted on top of mounting plate 130 and also rotates with shaft 22. Therefore, not only is it not "an upper circular plate", it also does not even rotate relative to mounting plate 130. The Examiner's evaluation of these parts of Walter is incorrect.

It is not clear exactly what structure in Walter the Examiner feels is equivalent to the claimed annular grooves in the lower fixed circular member. She refers to the following language in Walter:

"Fluid lines connected to the cylindrical face of the manifold plate 42 are connected to respective ones of the valve units 30 which include electrically controlled valves (not shown) which are not part of this invention."

How does this language have any relationship to the upwardly facing, radially spaced

annular grooves (see Figures 11 and 12 of this application) as defined in claim 14? The Examiner refers to part 214 in this rejection. This reference number in Walter is directed to a stud carried by each contact (see Figure 1), not to any annular chamber. Leads connected to the upper ends of studs 214, 216 extend to respective work stations. As regards plate 42, the fluid lines referred to in the above passage from Walter extend from the outer circumferential edge or rim of plate 42, through internal passageways in plate 42, and up to circular ports 118, etc. in the upper face of the plate, as indicated in Figures 7 to 10 and described in the specification. There are no annular grooves in plate 42, nor any grooves which are closed by an upper circular plate in the manner claimed in claim 14.

Again, the structure of claim 14 is completely lacking from Walter and this claim is not anticipated by this reference. Reconsideration and reversal of the rejection of claim 14 is respectfully requested.

On pages 6 to 7 of the Office Action, the Examiner goes on to reject claims 5 to 7, 12 and 13 as obvious in view of Walter. It is pointed out that, for a claimed invention to be obvious based on a single prior art reference, there must be some suggestion or motivation in the reference or the prior art as a whole to modify the reference, there must be a reasonable expectation of success, and the prior art reference must teach or suggest all claim limitations. The teaching or suggestion to modify the reference must be found in the prior art and not based on applicant's disclosure. In re Vaack, 947 F.2d 488, 20 USPQ2d 1438, see also MPEP 2143.

In the present case, as has been pointed out above, Walter lacks a number of the features claimed in claim 1, from which claims 5 to 7, 12 and 13 depend, and neither claim 1 nor claims 5 to 7, 12 and 13 are obvious in view of this reference. The purpose of the rotary valve assembly of Walter is quite different from that of the swivel joint assembly of the present invention. The present invention is concerned with supplying utilities such as gas, water, electricity, phone land lines, from fixed utility lines into a rotating building. In contrast, Walter is concerned with supplying operating fluids and power sequentially to a series of rotating work stations.

Not only is the objective in Walter completely different from this invention, but the valve assembly in Walter is also totally different from the structure claimed in claim 1. Walter simply does not have a first, fixed member having a plurality of annular chambers each having an opening and a second member rotatably mounted on the first member and extending over the openings in all of the annular chambers in order to close the respective chambers, nor any first set of ports in such a first member connected to the respective annular chambers, or any second set of ports in such a second member connected to the respective annular chambers. The Examiner's mark up of Figure 3 of Walter simply highlights the fact that Walter's valve structure is completely different from that claimed. The regions she points to as "annular chambers" are spaces between contacts of the rotary electrical switch 32, and clearly would not have any fluid supply. The regions the Examiner points to as "openings" are simply gaps between various mounting plates and also do not provide openings to any annular chambers. If these are "annular chambers" and "openings" within the meaning of claim 1 of this application, where in Walter is the second member which is rotatably mounted relative to these chambers and which extends over the marked "openings"? Also, where are the ports in both the first and second members which are connected to the Examiner's "annular chambers"?

It is submitted that claim 1 is neither anticipated nor obvious in view of Walter. It would be necessary to completely re-design Walter's valve in order to produce the structure as claimed in claim 1, and there is absolutely nothing in the teachings of this reference which would motivate one skilled in the field to do so, particularly in view of Walter's stated objectives of sequential operating fluid and power supply to a series of work stations. The present invention provides continuous utility fluid and power supply.

Claim 5 depends from claim 1 and is not obvious for the same reasons as claim 1, and additionally since the structure defined in claim 5 is neither shown nor suggested in any way by Walter. In his argument on page 6, the Examiner refers to the part 80, which is an inlet manifold communicating with manifold plate 42 having fluid ports for the individual work stations. The inlet manifold 80 rotates relative to plate 42 so that different fluids are supplied sequentially to the work-stations. This fluid-routing does not...

involve any annular chambers as defined in claim 1, but comprises simple circular ports and straight passageways, as seen in Figures 3 and 7 to 10 and described in the specification. Although Walter describes supply of different fluids to work stations in this way, the structure for supplying the fluids is totally different from that claimed in claim 1, as has been noted above. In the present invention, fluids are continuously supplied to the building and evacuated from the building via the various annular chambers, not sequentially as described by Walter. Thus, the ports of claim 1 are continuously connected to the annular chambers to provide a continuous passageway for utility and waste fluids to and from the rotating building. Because the chambers are annular in this invention, the openings or ports in the second member which rotates relative to the first member are continuously in communication with the respective chambers. In Walter, a circular port in the lower face of member 80 communicates with an upwardly facing circular port in member 42 only once during each full rotation of member 80. Since Walter's objective is the sequential connection of fluids to workstations, not continuous connection as in this invention, there would be no reason to modify Walter to provide any annular chambers.

Claims 5 to 7 are distinguished from Walter for the same reasons as stated above in connection with claim 1, and additionally since these claims define other features lacking from Walter. The Examiner contends that it would be obvious to replace the fluids described by Walter in column 4, lines 1 to 4, with the fluids claimed in claims 5 to 7. This argument is hereby traversed. Walter is concerned with supplying operating fluids to workstations. These fluids are clearly completely different in type from the fluids which flow in waste lines such as sewer lines and gray water drain lines. Such "fluids" would never be considered for manufacturing work stations.

It is submitted that claims 1 and 5 to 7 are not obvious in view of Walter, and reconsideration and reversal of the rejection of these claims based on this reference is respectfully requested.

Claims 12 and 13 also depend from claim 1 and are not obvious for the same reasons as stated above in connection with claim 1, and additionally since these claims

define other features not described or suggested in any way by Walter. In rejecting claims 12 and 13, the Examiner first acknowledges that Walter lacks each and every element claimed in these claims (see page 7, lines 4 to 12). In spite of the fact that Walter lacks the entire structure claimed in each of claims 12 and 13, the Examiner still contends that the structure claimed is obvious. The Examiner's argument concerning these claims is not understood. The Examiner has not explained how Walter could be modified to achieve the claimed invention, or why such a modification would be obvious. The Examiner states the motivation to be that it would allow a multiple work station machine with electrical and fluid connections to be made with each workstation in a timed relation. Since Walter's rotary valve assembly already achieves this objective (see column 6, lines 32 to 39), it is unclear why any modification of the valve assembly as illustrated and described in Walter would be considered necessary by one skilled in the field, particularly since the invention as defined in claims 1, 12 and 13 of this application is designed for continuous electrical and fluid supply to a rotating building, not sequential supply to workstations. Thus, any modification of Walter on the lines claimed in claims 1, 12 and 13 of this application would render Walter's valve inoperative for its stated purpose, since the structure of the swivel joint assembly of this application provides continuous, not sequential, supply of fluids and electricity as well as other utilities.

It is therefore submitted that claims 12 and 13 are also not obvious in view of Walter, and reconsideration and reversal of the rejection of these claims is respectfully requested.

On page 8 of the Office Action, the Examiner indicates that claims 4, 9 to 11 and 15 would be allowable if rewritten independently to include the subject matter of the base claim and any intervening claim. In the foregoing amendment, claim 4 has been rewritten as an independent claim including the subject matter of claims 1 and 2, from which it previously depended, and this claim should therefore now be allowable. Additionally, claim 9 has been rewritten as an independent claim including the subject matter of claims 1, 2 and 8, from which it previously depended, and should now be allowable, in addition to claims 10 and 11 which depend from claim 9. Finally, claim 15

has been rewritten as an independent claim including the subject matter of claims 1 and 14, from which it previously depended, and this claim should also now be allowable.

It is submitted that the foregoing amendment and argument deals with all outstanding grounds of objection and rejection and that claims 1 to 15, all claims remaining in this application following this amendment, should now be in order for allowance. It is submitted that this application is now in condition in all respects for allowance and issue, and early notice to this effect is earnestly solicited. If there are any outstanding objections which could be dealt with by means of a telephone interview, the Examiner is encouraged to contact the undersigned representative.

Respectfully submitted,

Dated: July 22, 2004

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